ADDENDUM No. 3 – Nelson Brush Site Water System

CITY OF SAN ANTONIO
Capital Improvements Management Services Department

PROJECT NAME: **Nelson Brush Site Water System**

DATE: August 23, 2011

This addendum shall be included in and be considered part of the plans and specifications for the above named project. The contractor shall be required to sign an acknowledgement of the receipt of this addendum at the time he receives it and returns the original signed form with the bid package.

CIMS Project No. 55-00022

GENERAL:

01) This Addendum consists of an additional alternate bid to construct the site entrance, electric site gate, entrance and median landscaping, irrigation systems, and associated electrical work.

SPECIFICATIONS

01) Form 020, Bid Form
Added line for Additional Alternate Bid Number 1to construct the site entrance, electric site gate, entrance and median landscaping, irrigation systems, and associated electrical work.

Please replace the 020 Bid Form with the new 020 Bid Form attached.

02) Form 025, Unit Pricing Form
Unit items for the Additional Alternate Bid have been added to the form. Additional lines include the entrance, electric gate, landscaping, irrigation system, and associated electrical work. There is a line to subtotal the additional alternate no. 1 bid amount.

Please replace the 025 Unit Pricing Form with the new 025 Unit Pricing Form attached.

03) Section 01010, Summary of Work
Section 01010 has been revised to incorporate the scope of work associated with the Additional Alternate Bid No. 1.

Please replace Technical Specification Section 01010, Summary of Work, with the new Section 01010, Summary of Work.

PLANS
Add the following drawings to the Contract Documents:

01) L1 – Entrance Landscaping Plan
02) L2 – Entrance Landscaping Plan
03) L3 – Entrance Landscaping Plan
04) L4 – Median Treatment Plans
05) L5 – Median Treatment Plans

06) E1 – Entrance and Landscaping Electrical Plan
07) Entrance Wall and Gate Footer Details

ATTACHMENTS:

01) 020 Bid Form
02) 025 Unit Pricing Form
03) L1 – Entrance Landscaping Plan
04) L2 – Entrance Landscaping Plan
05) L3 – Entrance Landscaping Plan
06) L4 – Median Treatment Plans
07) L5 – Median Treatment Plans
08) E1 – Entrance and Landscaping Electrical Plan
09) Entrance Wall and Gate Footer Details
10) Addendum Acknowledge Form

END OF ADDENDUM No. 3

ADDENDUM REVIEWED & APPROVED BY:

CIMS Project Manager **Luis Maltos** **Date 08/23/2011**

CITY OF SAN ANTONIO

020

BID FORM

The estimated construction budget for this contract is $ 530,000.00

I. TOTAL BASE BID AMOUNT (Insert Amount in Words and Numbers):

Total Amount of Base Bid (Insert Amount in Words and Numbers):

_____ $_____

II. ADDITIONAL ALTERNATES

Additional Additive Alternate #1 - Construct the site entrance, electric site gate, landscaping, irrigation system, and associated electrical work

Total Amount of Bid for Additional Alternate #1 (Insert Amount in Words and Numbers):

_____ $_____

III. TOTAL BID AMOUNT (Insert Amount in Words and Numbers):

Total Amount of Bid (Base Bid + Additional Alternate No. 1) (Insert Amount in Words and Numbers):

_____ $_____

IV. UNIT PRICES

Bidders shall submit unit pricing on the 025 Unit Pricing form, and it shall be attached immediately following this sheet.

Official Name of Company (legal)	Telephone No.
Address	Fax No.
City, State and Zip Code	E-mail Address

CITY OF SAN ANTONIO

025 UNIT PRICING FORM

PROJECT NAME: Nelson Brush Site Water System

PROJECT NO. 55-00022

BASE BID AMOUNT

ITEM NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT
1	Mobilization	Lump Sum	1		
2	Insurance	Lump Sum	1		
3	Bonding	Lump Sum	1		
4	Temporary Erosion Controls (Includes 110 LF Silt Fence)	Lump Sum	1		
5	Site Work	Lump Sum	1		
6	Fences	Linear Feet	152		
7	16' Double Gate	Each	2		
8	Pavement	Square Yard	225		
9	Concrete Flatwork, Complete	Cubic Yard	3		
10	Building Foundation, Complete	Lump Sum	1		
11	Utility Building, Complete	Lump Sum	1		
12	Electrical Service and Systems, Complete	Lump Sum	1		
13	Mechanical Systems, Complete	Lump Sum	1		
14	Package Fire Pump System, Complete	Lump Sum	1		
15	Piping and Plumbing	Lump Sum	1		
16	Water Meter, Complete	Each	1		
17	Pressure Tank, Complete	Each	1		
18	Chlorination System, Complete	Each	1		
19	Carbon Backwash System, Complete	Each	1		
20	Altitude Valve, Complete	Each	1		
21	Double Check Assembly, Complete	Each	1		
22	Fire Hydrant, Complete	Each	2		
23	Bollards, Complete	Each	14		
24	Well Pump, Complete	Lump Sum	1		
25	Water Well Surface Conductor, Complete	Linear Feet	60		
26a	Water Well Drilling Upper Hole (60' to 1000' bgs), Complete	Linear Feet	940		
26b	Water Well Drilling Upper Hole (1000' to 1250' bgs), Complete	Linear Feet	250		
26c	Water Well Drilling Upper Hole (1250' to 1500' bgs), Complete	Linear Feet	250		
26d	Water Well Drilling Upper Hole (1500' to 1750' bgs), Complete	Linear Feet	250		
26e	Water Well Drilling Upper Hole (1750' to 1800' bgs), Complete	Linear Feet	50		
27	Water Well Casing Upper Hole, Complete	Linear Feet	1800		
28	Water Well Cementing Casing, Complete	Cubic Feet	1280		
29	Water Well Drilling Lower Hole, Complete	Linear Feet	200		

PROJECT NAME: Nelson Brush Site Water System
PROJECT NO. 55-00022

30	Water Well Geophysical Logging	Lump Sum	1		
31	Pump Test	Lump Sum	1		
32	Water Well Headworks	Lump Sum	1		
33	Water Storage Tank Foundations, Complete	Lump Sum	1		
34	Water Storage Tanks, Complete	Lump Sum	1		
35	Miscellaneous	Lump Sum	1		
				TOTAL BASE BID AMOUNT	

ADDITIONAL ALTERNATE NO. 1 BID AMOUNT

ITEM NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT
1	Entrance	Lump Sum	1		
2	Electric Gate	Lump Sum	1		
3	Landscaping	Lump Sum	1		
4	Irrigation System	Lump Sum	1		
5	Entrance/Gate/Irrigation Electrical	Lump Sum	1		
				TOTAL ADDITIONAL ALTERNATE NO. 1 BID AMOUNT	

_____certifies that the unit prices shown on this complete computer print-out for all of the bid items and the alternates contained in this proposal are the unit prices intended and that its bid will be tabulated using these unit prices and no other information from this print-out.

_____Acknowleged and agrees that the total bid amount shown will be read as its total bid and further agrees that the official total bid amount will be determined by multiplying the unit bid prices shown in this print-out by the respective estimated quantities shown in the proposal and then totaling all of the extended amounts. _____ agrees to the terms, conditions, and requirements of the bidder's bid proposal.

Signed: _____ Date: _____

Title: _____

SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. The scope of work is to construct and/or install an Edwards Aquifer potable water well, utility building, water storage tanks, water piping and equipment, and all other required facilities to provide a complete potable water supply system and fire protection system to serve existing and future buildings at the site. All work shall be in accordance with these specifications and associated drawings. The project is located at the City of San Antonio brush recycling facility at 8963 Nelson Road in San Antonio, Texas. The brush facility is currently under construction. Work under this project shall include, but is not limited to, the following:

1. Mobilize to the site including all facilities, equipment, personnel, materials, supplies, tools, and all other items required to complete the work. Sequence work to maintain access to COSA personnel to the closed Nelson Gardens Landfill and the brush recycling facility currently under construction.
2. Install all temporary facilities including erosion controls, tree protection, temporary utilities, site sign, and security.
3. Clear and grub the area within the limits of work.
4. Perform earthwork as required to meet subgrade and final grade elevations as shown on the plans.
5. Properly install fill materials and flexible base as shown on the plans to design grades.
6. Install Edwards Aquifer well including drilling, casing, well pad and well head completion.
7. Install all water distribution piping, fittings, valves, equipment, meters, sample ports, controls, and appurtenances as required.
8. Construct access road and new pavement areas.
9. Construct new utility building including all required mechanical, electrical, plumbing, lighting, doors, finish out, and appurtenances, complete.
10. Construct water storage tanks with appurtenances.
11. Install fire service lines, valves, fire hydrants, fittings and appurtenances.
12. Install fire protection pump and jockey pump with associated piping, connections, fittings, valves, equipment, electrical, and controls.
13. Install all electrical work required for a complete and operational facility including pumps, altitude valve, timers, equipment, and appurtenances. This includes bringing a new electrical service line from the existing power pole as shown on the plans.
14. Install all fencing and gates as shown on the plans.

15. Install pavement and pavement markings as shown on the plans.
16. All required incidentals including, but not limited to, coordination and meetings, submittals, all materials testing including compaction testing and concrete testing, quality control, and record documents.

B. An additional alternate bid has been added to the scope of work. This work consists of construction of the site entrance, electric site gate, entrance and median landscaping, irrigation systems, and associated electrical work. This work includes the following:

1. Construct the site entrance including columns, walls, wall signs, wall footing, sign art, and all other items for a complete entrance.
2. Construct electric site gate with square steel tubing, posts, v track with concrete track support base, sign art, motor, key pad, and all other materials and work for a complete and operational electric gate.
3. Install all plants, trees, and landscaping materials at the entrance and in the medians as shown on landscaping drawings.
4. Install irrigation system including laterals, electric valves, sprinkler heads, controllers, and all other materials and work for a complete and operational irrigation system. Coordinate with the existing contractor constructing the brush site.
5. Construct all necessary electrical services for the entrance lighting, electric gate, irrigation controllers and valves as required for a complete and operational system. Coordinate with the existing contractor constructing the brush site.

1.02 GENERAL REQUIREMENTS

A. All work shall be performed completely including all incidentals, subsidiary, and clean-up of the work area with all costs thereof being included in the prices in the bid proposal.

B. All work shall be performed in compliance with all Federal, State, and local laws, regulations, and codes governing the work including obtaining applicable notifications, permits and approvals. The well and well pump shall be installed in accordance with the Edwards Aquifer Authority and San Antonio Water System specifications, rules, and guidelines.

C. Protect existing property including existing groundwater monitoring wells and vegetation. Appropriate measures shall be taken to avoid damage. Tracked vehicles shall not be operated on paved surfaces. Replace or repair any damage to existing property to an equal or better condition.

1.03 COORDINATION WITH OTHER WORK

A. The Nelson Brush Site is currently under construction under a separate contract issued to Pletz Construction. Work being performed by this contractor includes site work, roads, parking areas, truck scales and scale building, brush and mulch areas, fences, electrical service to the scale

building, communication systems, stormwater management facilities, water distribution systems, and sewer facilities.

B. Coordinate work under this scope of work with construction associated with the Nelson Brush Site. This includes site access, connection to water distribution piping, connection to fire line piping, electrical service connections, connection to paved surfaces, and all other work that coordination is required.

C. Be fully responsible for all coordination with current construction at the site at no additional cost to COSA.

1.04 PROJECT RECORD DOCUMENTS

A. Maintain record documents including drawings, specifications, submittals, and other applicable records in clean, dry, legible condition.

B. Mark/record actual construction including location of underground utilities, field changes, facilities, and change orders on drawings. Record drawings shall be provided prior to final payment.

1.05 REFERENCED SPECIFICATIONS

A. The Standard Specifications for Public Works Construction dated December 2008 (including latest revisions and additions) shall be incorporated by reference to these specifications and made applicable to this project. Items made applicable to this project include, but are not limited to, the following:

ITEM NO.	TITLE
100	Mobilization
101	Preparing Right-of-Way
104	Street Excavation
107	Embankment
200	Base and Surface Courses
202	Prime Coat
205	Hot Mix Asphaltic Pavement
300	Concrete (Natural Aggregate)
301	Reinforcing Steel
305	Membrane Curing
306	Structural Excavation
307	Concrete Structures
402	High Density Corrugated Polyethylene Pipe
403	Storm Sewer Junction Boxes and Inlets
410	Subgrade Filler
503	Asphaltic Concrete, Portland Cement Concrete, and Gravel Driveways
505	Concrete Riprap
507	Chain Link Wire Fence
511	Cutting and Replacing Pavements

540	Temporary Erosion, Sedimentation, and Pollution Control
692	Communication Cable

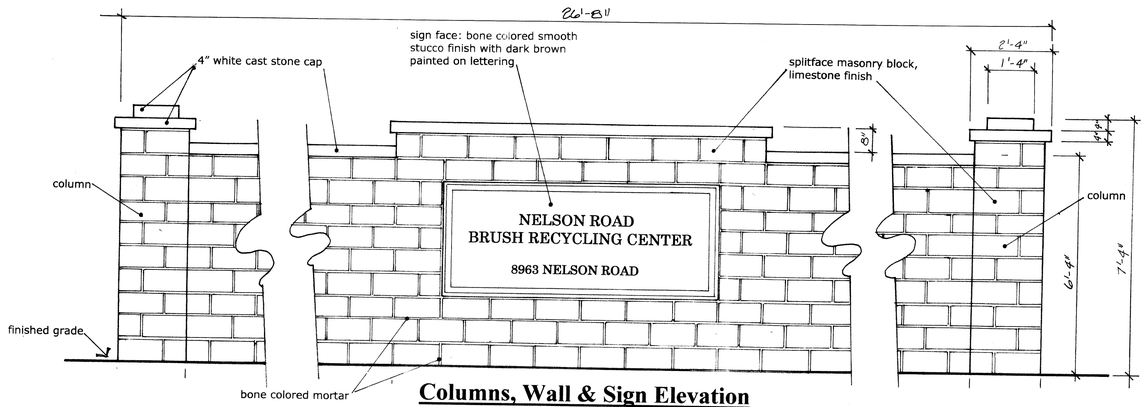
B. The San Antonio Water System Specifications for Water and Sanitary Sewer Construction dated June 2009 (including latest revisions and additions) shall be incorporated by reference to these specifications and made applicable to this project. Items made applicable to this project include, but are not limited to, the following:

ITEM NO.	**TITLE**
550	Trench Excavation Safety Protection
804	Excavation, Trenching and Backfill
812	Water Main Installation
814	Ductile Iron Pipe
818	PVC (C-900) Pipe Installation
828	Gate Valves
834	Fire Hydrants
836	Grey Iron and Ductile Iron Fittings
839	Anchorage and Thrust Blocking
841	Hydrostatic Testing Operations
846	Air Release Assemblies
847	Disinfection

PART 2 - MATERIALS (Not Applicable)

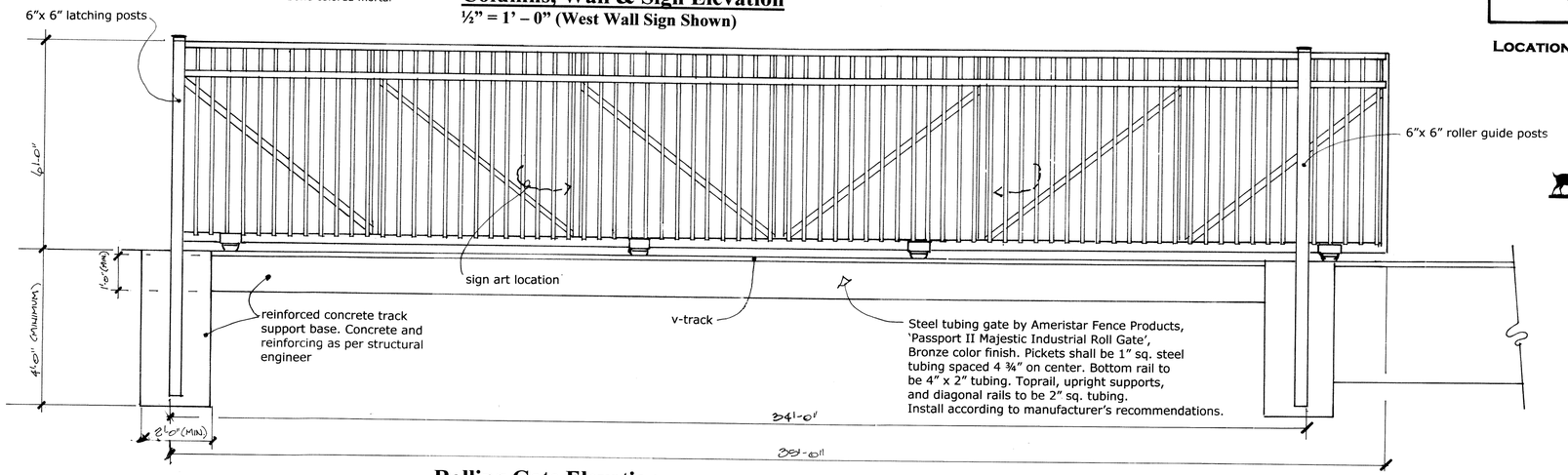
PART 3 - EXECUTION (Not Applicable)

END OF SECTION



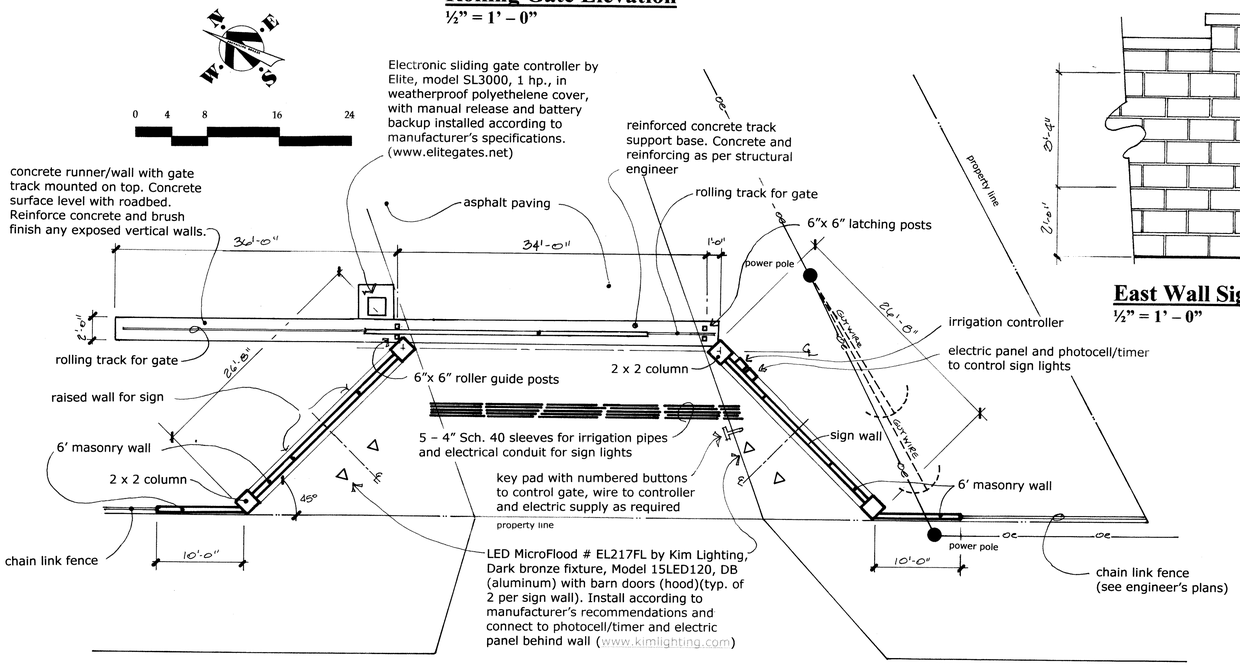
Columns, Wall & Sign Elevation

½" = 1' – 0" (West Wall Sign Shown)



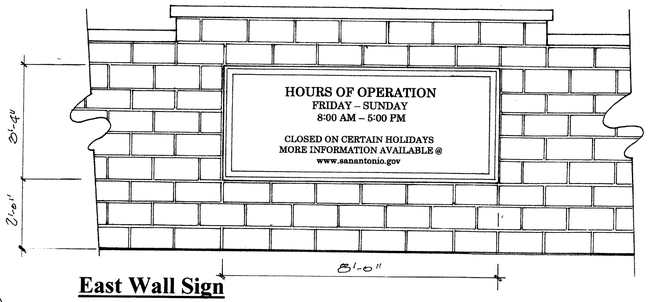
Rolling Gate Elevation

½" = 1' – 0"



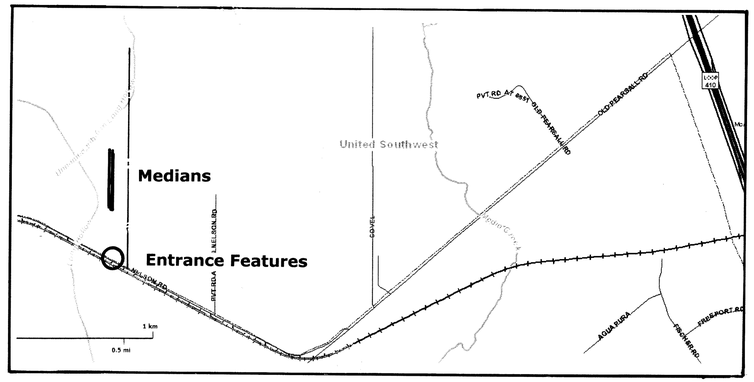
Site Development Plan

Nelson Road



East Wall Sign

½" = 1' – 0"

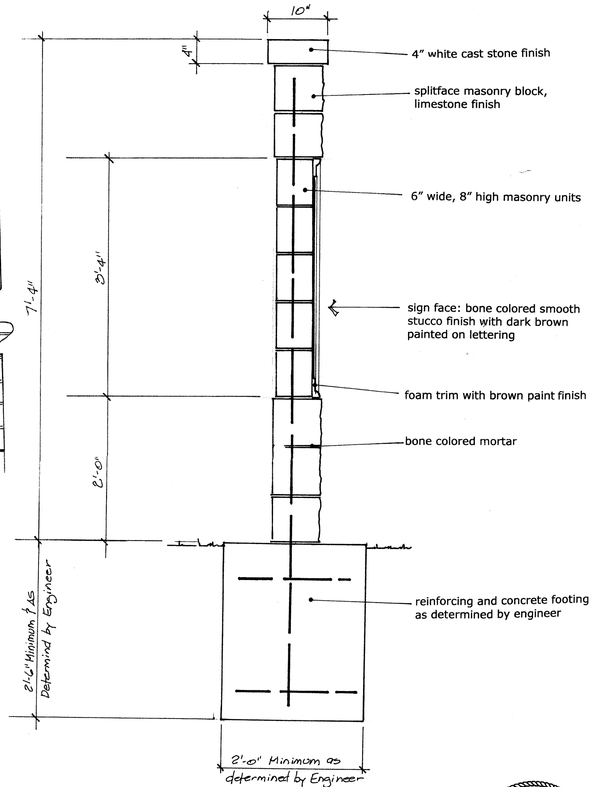


Location Map

gate to be decorated with metal flat Texana Gate art: one tree in the center of the gate (tree may extent above gate toprail by up to 2') with 6 wildlife pieces surrounding tree, animals to be selected from this group or similar as suggested by artist. All pieces joined by common ground line with suggested vegetative variations to ground line (overall length app. 15') by Patterson Metal Art, 816 Old Pidcoke Road, Gatesville, Texas 76528. (254) 216-0425 randy@pattersonmetalart.com

Gate Decoration

not to scale



Wall/Sign Section

1" = 1' – 0"

STATE OF TEXAS
PETER B. OLFERS
487
REGISTERED LANDSCAPE ARCHITECT
8/1/11

ENTRANCE DEVELOPMENT PLAN

DRAWING 11-039 8/1/11 L1

PETER OLFERS & ASSOCIATES

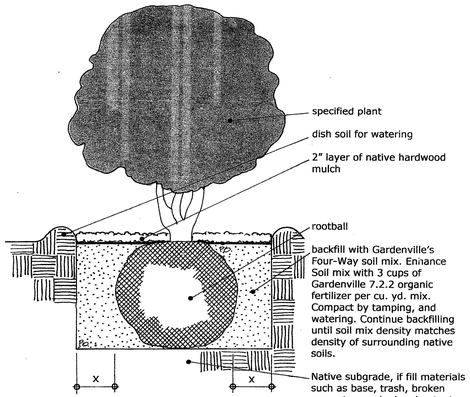
Peter B. Olfers and Associates
Landscape Architecture and Planning
6322 Sovereign, Suite 137B
San Antonio, Texas 78229
(210) 349-9336 FAX (210)349-3820
email: ptrolfers@yahoo.com

ENTRANCE LANDSCAPING PLAN
NELSON ROAD BRUSH SITE
CITY OF SAN ANTONIO SOLID WASTE MANAGEMENT DEPARTMENT
** NELSON ROAD SAN ANTONIO, TX 78252

Plant Materials Schedule

item	common name	scientific name	specifications
LO	Monterey Oak	Quercus polymorpha	2" cal., 10' - 12' tall, BB/CT
SOK	Shumard Oak	Quercus shumardi	3" cal., 13'-16' tall, 30" BOX
TML	Texas Mt. Laurel	Sophora secundiflora	5' tall, multit., 5' sprd., BB
DYH	Dfwarf Yaupon Holly	Ilex vomitoria nana	16" sprd., 5 gallon
RYC	Red Yucca	Hesperaloe parviflora	5 gallon
SOT	Sotol	Dasyrilion texanum	5 gallon
TSG	Silver Cloud Cenizo	Leucophyllum fruts. Silver Cloud	24" tall, 5 gallon
NGL	New Gold Lantana	Lantana camara new Gold	1 gallon
RSL	Red Autumn Sage	Salvia greggi red	1 gallon
WLN	White Lantana	Lantana camara white	1 gallon
GRS	Bermudagrass	Cynodon dactylon	5 lbs./1,000 sq.ft.
EDGING	1/4" x 4" steel edging set vertical with 1" exposed above finished grade		

Planting Beds: All beds shall be excavated to a **minimum depth of 8"**. All excavated material shall be properly disposed of off-site. Backfill to full depth with Gardenville's Four-Way Mix, or approved equal, in 4" compacted lifts. Then cover each bed with 'Weed-Stopper' synthetic fabric, by Fabrico, Inc. (800) 9923-0550. Install plants by cutting small openings equal to the size of the rootball. After all plants are installed, place a 2" layer colored pea gravel mulch.



plant	x
trees greater than 6" cal.	15"
trees 3" cal. to 6" cal.	12"
trees less than 3" cal.	9"
specimen shrubs	9"
10,15,20 gal. plants	9"
3,5,7 gal. plants	6"
1,2 gal. plants	6"

Typical Plant Installation

Not to Scale

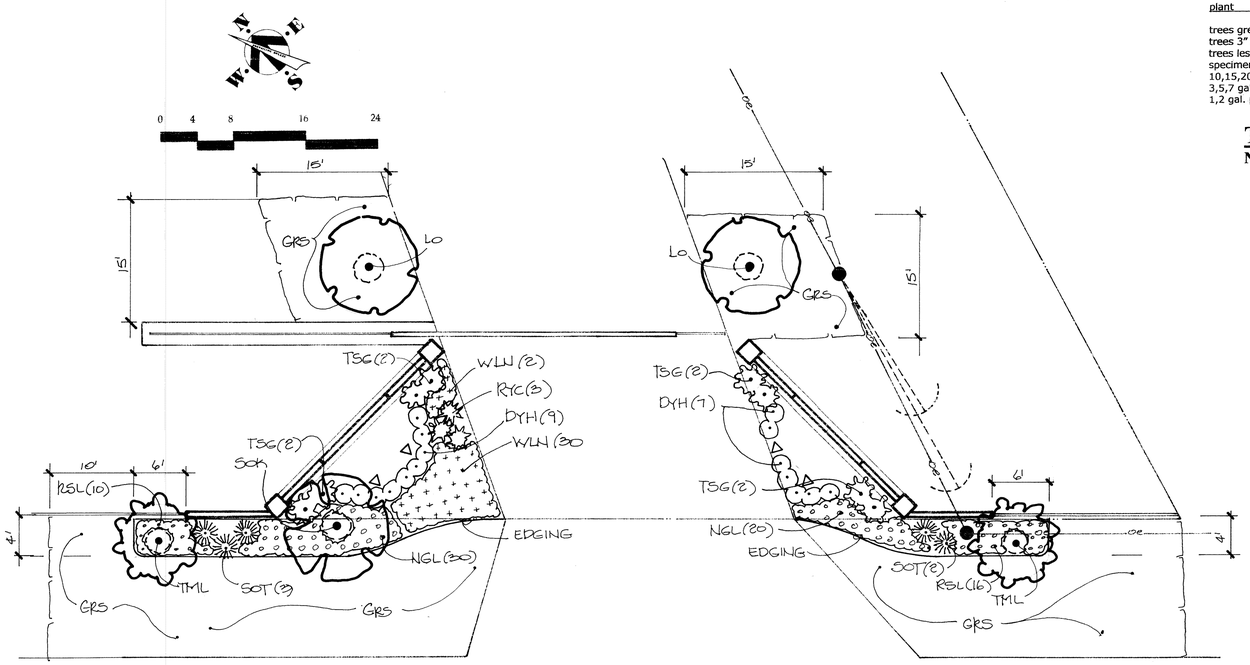
Topsoil Notes:

All lawn areas shall receive a **minimum** cover of **4" of approved topsoil**. Topsoil shall be lain to eliminate ponding and mounding with adequate grading to move water away from structures as appropriate. Topsoil shall fully cover any exposed rock, gravel, etc. that is natural to the site unless otherwise directed by the Owner. If the area to receive topsoil cover has **imported** base, gravel, debris, etc., such material shall be removed to full depth and replaced with approved topsoil to subgrade and finished grades as required on the plans and/or details.

Acceptable topsoil shall be a high quality loam or sandy loam topsoil with a ph between 7.5 and 8.4, free of all rocks ¾" in diameter or larger, free of debris, trash, etc. with a minimum of 1.0% organic matter. Acceptable topsoils meeting all of the above requirements excepting for the minimum organic matter specified shall have native hard wood mulch thoroughly mixed throughout soil to achieve minimum requirements. At locations on site where existing topsoils meet this requirement, and the specific area meets all drainage and other requirements (whether natural or code related), then in such areas so noted, no new topsoil will be required. Satisfaction of meeting these topsoil requirements is at the discretion of the Owner.

Maintenance of Installed Plantings:

All installed plant materials (trees, shrubs, groundcovers, perennials, florals, grass, etc.) shall be maintained by the landscape contractor until accepted by the Owner. Maintenance shall include watering, weeding, fertilizing, pruning, etc. At the time of final acceptance, all plant materials shall be alive, in a healthy state of growth and meeting size requirements as specified on the drawings as well as normal horticultural practice standards. Any diseased, dead or partially dead plants shall be immediately replaced. All plantings shall be guaranteed for one year from the date of final acceptance.



Nelson Road

STATE OF TEXAS
PETER B. OLFERS
487
REGISTERED LANDSCAPE ARCHITECT
8/19/11

ENTRANCE LANDSCAPE PLAN

DRAWING
11-039
8/11/11
L2

PETER OLFERS & ASSOCIATES
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ENTRANCE LANDSCAPING PLAN

NELSON ROAD BRUSH SITE

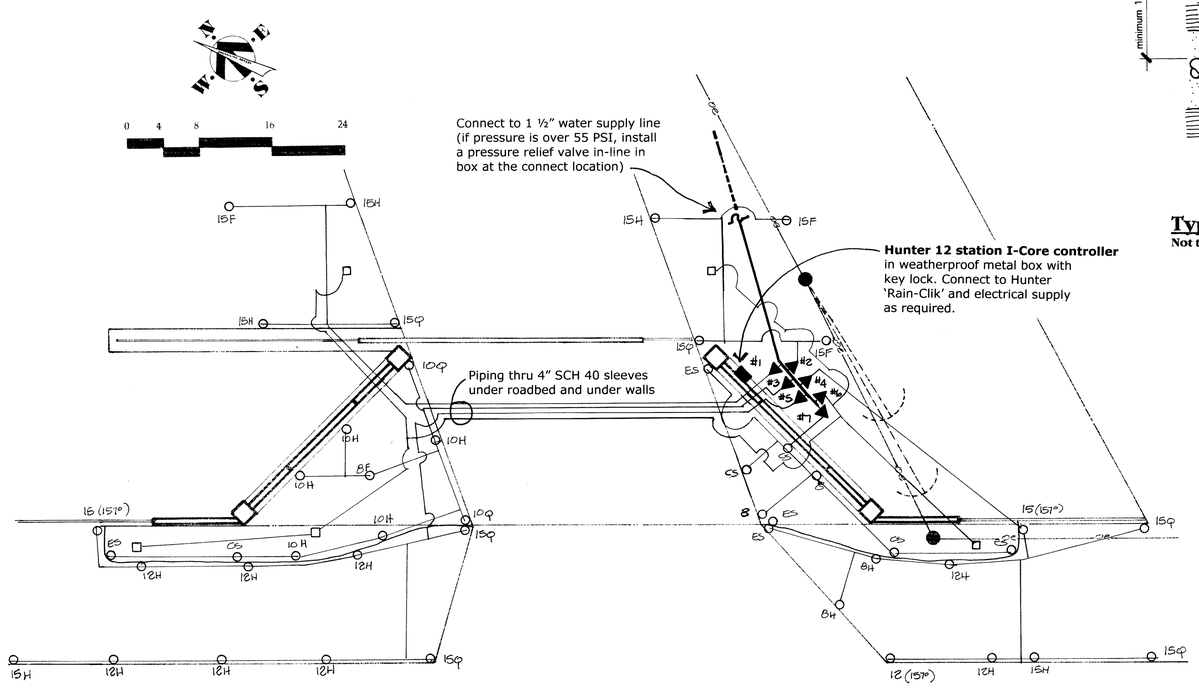
CITY OF SAN ANTONIO SOLID WASTE MANAGEMENT DEPARTMENT
** NELSON ROAD SAN ANTONIO, TX 78252

Lateral Lines Data:

section	valve size	gpm	heads	1/2" coverage
1	1"	9.0 gpm	sprays (grass)	22 minutes
2	1"	11.0 gpm	sprays (grass)	22 minutes
3	1"	8.2 gpm	sprays (bed)	22 minutes
4	1"	10.3 gpm	sprays (grass)	22 minutes
5	1"	13.3 gpm	sprays (grass)	22 minutes
6	1"	5.0 gpm	bubblers	20 minutes
7	1"	5.7 gpm	sprays (bed)	22 minutes

Irrigation Legend

Schedule 40 PVC Mainline
Rigid Class 200 PVC Lateral
Hunter Series INST (6" & 12")* Pop-up
Hunter Series INST 06-PCN #50 Bubbler
Hunter Series PGV Electric Valve in Box
(*6" pop-up in grass, 12" pop-up in beds)



Nelson Road

Sprinkler Heads & Valves Data:

Pop-up Spray Heads: Hunter Pro-S Series Pop-up Spray
(4" for turf, 12" for beds and shrubs)(acceptable alternates: Toro 570, Rainbird 1800, Weathermatic LX)
(all MPR)

ARC	target PSI	15' nozzle	12' nozzle	10' nozzle	8' nozzle	5' nozzle	17' nozzle
360°	40 psi	4.0 gpm ( )	2.35 gpm (12)	1.6 gpm (10)	1.1 gpm (8)	0.5 gpm (5)	5.5 gpm (17)
270°	40 psi	3.0 gpm ( )	1.7 gpm (12)	1.2 gpm (10)	0.9 gpm (8)	0.35 gpm (5)	4.1 gpm (17)
240°	40 psi	2.7 gpm ( )	1.65 gpm (12)	1.1 gpm (10)	0.8 gpm (8)	0.3 gpm (5)	3.7 gpm (17)
180°	40 psi	2.0 gpm ( )	1.3 gpm (12)	1.0 gpm (10)	0.6 gpm (8)	0.25 gpm (5)	2.8 gpm (17)
120°	40 psi	1.3 gpm ( )	0.9 gpm (12)	0.7 gpm (10)	0.4 gpm (8)	0.2 gpm (5)	1.8 gpm (17)
90°	40 psi	1.0 gpm ( )	0.6 gpm (12)	0.3 gpm (10)	0.2 gpm (8)	0.1 gpm (5)	1.4 gpm (17)
end strip	40 psi	0.5 gpm (es)					
center strip	40 psi	1.0 gpm (cs)					
wide strip	40 psi	1.4 gpm (ws)					

( ) - designates marking on plan

Bubblers: Hunter PCN nozzle in PRO-S body
(acceptable alternates: Toro FB nozzles in 570 body, Rainbird 1400 nozzle in 1800 body, Weathermatic 102 nozzle in LX body)
360° 40 psi 1.0 gpm

Rotarys: Hunter I-10/I-20 4" pop-up, 2.0 nozzle 2.0 gpm @ 40 psi

Electric Valves: Hunter PGV Series

0.1 gpm to 17.5 gpm	1" valve
17.6 gpm to 40.0 gpm	1 1/2" valve
40.1 gpm to 70.0 gpm	2" valve
70.1 gpm +	3" valve

Piping Size Requirements: (based on Class 200)

no 1/2" laterals allowed	
0.1 gpm to 6.0 gpm	3/4" PVC
6.1 gpm to 10.0 gpm	1" PVC
10.1 gpm to 20.0 gpm	1 1/4" PVC
20.1 gpm to 30.0 gpm	1 1/2" PVC
30.1 gpm to 50.0 gpm	2" PVC
50.1 gpm to 75.0 gpm	2 1/2" PVC
75.1 gpm +	3" PVC

Special Spray Head Performance Note: In areas where normal spray from a pop-up will pass more than 6" beyond the leading edge of a curb, walk, etc., the adjustment screw on the nozzle top shall be adjusted to cut back the spray as required.

Sprinkler Irrigation Component Parts List

Sprinkler Heads:
Pop-up Spray Heads select from following – Matched Precipitation Rates (MPR):
Hunter INST Series — Toro 570 Series, MPR nozzles
Weathermatic LX Series, MPR

Bubblers (select from following)
Hunter PCN nozzle in PRO-S body — Toro FB nozzles in 570 body
Weathermatic 102 nozzle in LX body

Small Radius Rotary Heads:
Hunter Series I-10/I-20 rotary

Check Valve or Valve In Head (must install a minimum of one per each lateral):
select from the following:
Irritrol SLCV Check Valve — Rainbird 1800-SAM-PRS
Toro 570 Series, Check-o-matic — Hunter I Spray - CV

Electric Valves, except Master Valve: select from following:
Hunter PGV Series — Weathermatic 11000CR Series
Irritrol 700 Series

Master Valves: select from following:
Irritrol 700 Series — Hunter ICV Series

Double Check Valve Assemblies: select from following:
Conbraco Series 40-100 for ¾" to 4"
Febco Master Series 850 for ¾" to 6"

Piping (White for normal applications, purple for reclaimed water):
Mains: Schedule 40 PVC for ¾" to 2 ½", Class 200 for 3" and greater.
Solvent weld for ¾" to 2 ½", solvent weld or ring-tite for 3" and greater
Laterals: Class 200, solvent weld for ¾" to 2 ½", solvent weld or ring-tite for 3" and greater
Fittings: a working pressure equal to or greater than the required pipe
Solvent: compatible to the pipe used

Swing Joints: select from following:
KBI swing joint — Hunter SJ Series

Wiring: All wire shall be Type UF with a minimum 4/64" insulation and sized as follows:
#14 for wire runs from valve to controller not to exceed 1,500 lin.ft.
#12 for wire runs greater than 1,500 lin.ft. but less than 2,500 lin.ft.
#10 for wire runs greater than 2,500 lin.ft. but less than 3,800 lin.ft.

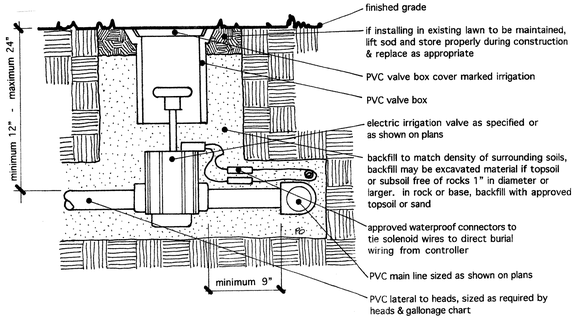
Wire Nuts and Waterproof Connectors:
Wire nuts to be Type UF and approved for ground mount in irrigation systems
Waterproof connectors to be by 3M, King, or approved equal

Valve Boxes: select from following:
For electric valves, in-line valves, etc.
Ametek Economy Turf Box — DFW Model D-109
For double check valve assemblies and other large valves/meters
Ametek Meter Box — DFW Model D-1200 or D-1800

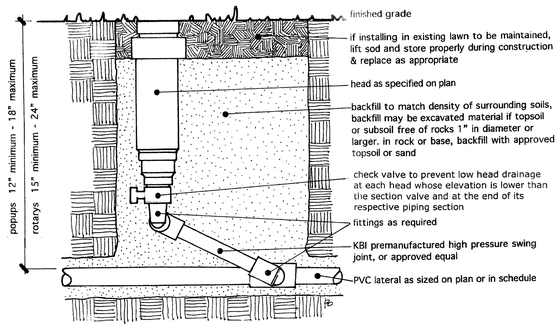
Controllers: as specified on plans

Irrigation Installation Notes:

1. The contractor shall install an **electric controller** as identified on the plan. The controller shall be mounted between 42" and 54" above finished grade, in a waterproof box with keylock (if exterior mounted), and shall be direct wired to all valves, master valve, and electrical supply as required. Unless otherwise indicated on the plan, the controller shall be solid state, controllable between 1 minute and 60 minutes per station, and shall have an adequate number of stations to operate all lateral lines and the master valve. The controller shall be compatible to the rainstat and any other supplemental controls.
2. The controller shall be connected to a **rainstat** override system which will skip the watering cycle whenever adequate rain has occurred. The rainstat shall be exterior mounted as near as possible to the controller, and in a location where overhead obstructions such as trees, building overhangs, signs, etc. will not affect performance. Typical mounting will be at the eave edge.
3. All **water pipe** shall be rigid PVC class 200 or better as noted on the plans. All **sleeves** shall be Schedule 40 rigid PVC and a minimum of 4".
4. Except where required as a component in the installation of a riser, **no ½" pipe** will be allowed.
5. All pipe shall have a **minimum cover** of ten inches (10").
6. All irrigation parts/components will be **new equipment** at the time of installation and will conform to the latest specifications and catalog of the respective manufacturer.
7. Each lateral shall have its lowest head in elevation equipped with a **low head drainage check valve,** either externally mounted on the sprinkler or internal (SAM type).
8. **Backfill** material will be free of rocks greater than 1" in diameter, trash, and other debris. Backfilling will be completed in a manner to compensate for soil settling, and the top 4" of backfill in landscape areas shall be approved topsoil or soil mix to match final landscape plan requirements. Where lined are installed in existing lawns, sod cover shall be neatly removed prior to ditching, stockpiled in an appropriate manner, and replaced after backfilling and compaction is completed.
9. The contractor shall be responsible for **removing** all debris, spoil, etc. and for properly **disposing of** off site.
10. The irrigation contractor shall be responsible for **securing any and all construction permits** (if not secured by a general contractor) and shall be responsible for securing all inspections and approvals by appropriate governing bodies.
11. All connections to domestic water systems **(water meters)** shall be made by appropriately licensed and certified individuals. A Licensed Irrigator shall oversee all installation. At the completion of installation, the same Licensed Irrigator who oversaw installation shall be responsible for any certifications to governmental agencies or other appropriate groups.
12. After completion, the system shall be subjected to a **72 hour pressure test.** All leaks and other problems shall be corrected immediately.
13. All sprinkler heads shall be installed **a minimum of 4" away** from all curbs, walks, and other appurtenances.
14. All trenching/digging within the **Root Protection Zone (RPZ)** of existing trees as identified by governmental agencies and counted as trees to be saved shall be completed by hand digging. No tree roots larger than 1" in diameter shall be cut, and any marred or damaged roots shall be treated with an approved pruning paint.
15. The contractor shall be responsible for verifying the location of all other **underground utilities** and shall protect such utilities from damage, etc.



Typical Electric Valve Installation
Not to Scale



Typical Head Installation
(with check valve where required)
Not to Scale

ENTRANCE IRRIGATION PLAN

DRAWING 11-039 8/11/11 **L3**

PETER OLFERS & ASSOCIATES
Peter B. Olfers and Associates
Landscape Architecture and Planning
6727 Sovereign, Suite 103B
San Antonio, Texas 78229
(210) 349-9336 FAX (210) 349-3820
email: ptrolfers@yahoo.com

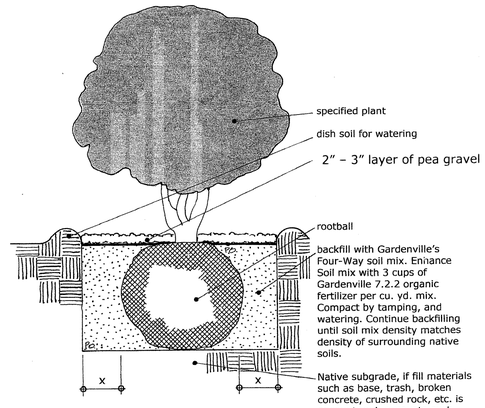
ENTRANCE LANDSCAPING PLAN
NELSON ROAD BRUSH SITE
CITY OF SAN ANTONIO SOLID WASTE MANAGEMENT DEPARTMENT
** NELSON ROAD SAN ANTONIO, TX 78252

Plant Materials Schedule

item	common name	scientific name	specifications
CE	Cedar Em	Ulmus crassifolia	2" cal., 10' - 12' tall, 30 gallon
LO	Live Oak	Quercus virginiana	2" cal., 10' - 12' tall, 30 gallon
ABE	Ed Goucher Abelia	Abelia grandiflora Ed Goucher	18" tall, 5 gallon
WAX	Wax Myrtle	Myrica cerifera	21" tall, 5 gallon

SEED — Remove all debris from area, then hand rake to loosen top 1" of topsoil. Seed over loosened soil bed with 'Native Trail Mix' (native wildflowers and grasses) by Native American Seed (800) 728-4043, at the rate of 3.0 lbs./1,000 sq. ft. of permeable surface area. Then fertilize with Gardenville's Organic Fertilizer - 7.2.2 at the rate of 5 lbs./ 1000 sq. ft. Water in thoroughly and as needed to assist small plants to grow.

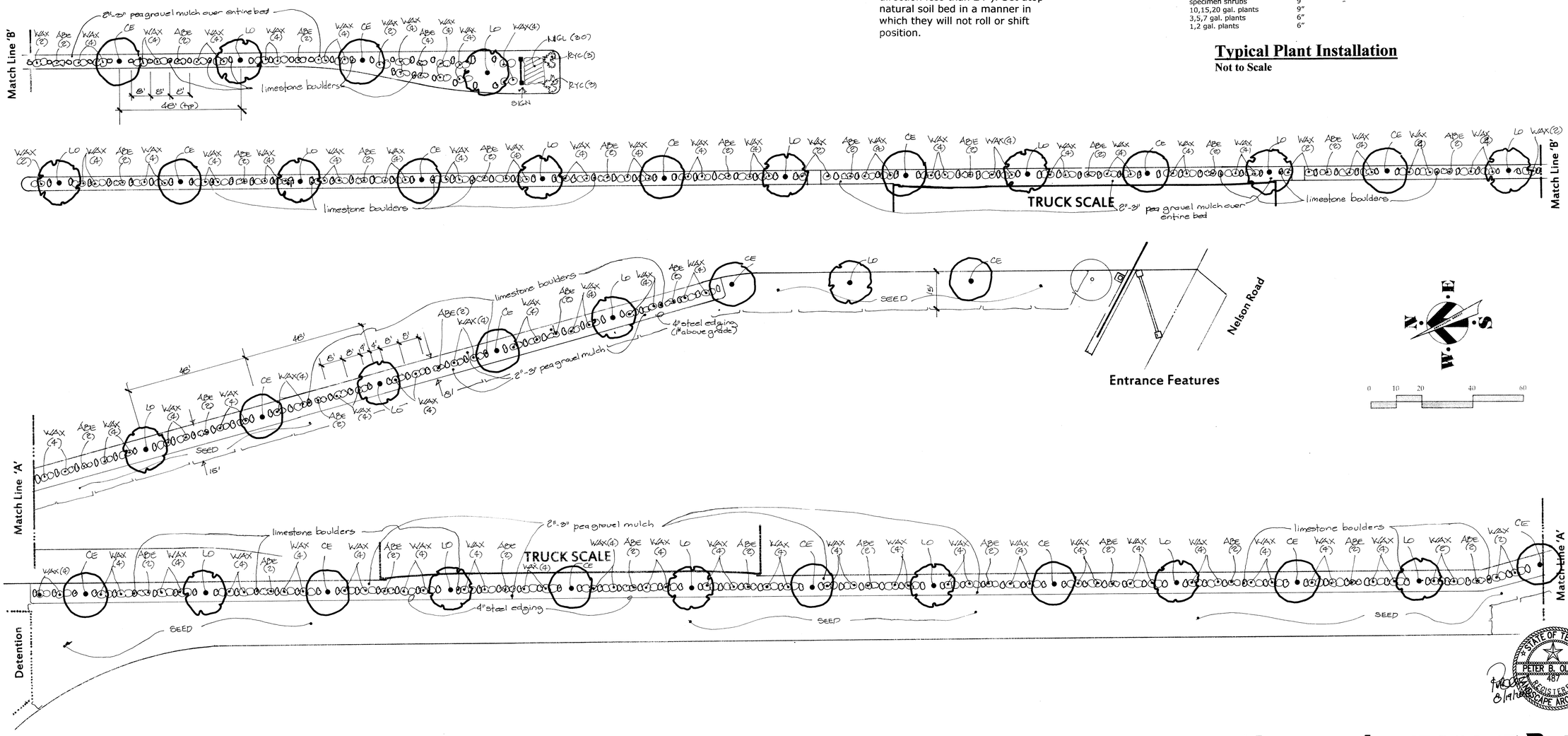
install 4" steel edging vertical where shown with 1" exposed above finished grade. Secure with a minimum of 3 steel stakes per 10' section



plant	x
trees greater than 6" cal.	15"
trees 3" cal. to 6" cal.	12"
trees less than 3" cal.	9"
specimen shrubs	9"
10,15,20 gal. plants	9"
3,5,7 gal. plants	6"
1,2 gal. plants	6"

Typical Plant Installation
Not to Scale

All boulders to be natural, irregular shape limestone, minimum 30" in diameter (with no dimension in any direction less than 24"). Set atop natural soil bed in a manner in which they will not roll or shift position.



MEDIANS LANDSCAPE PLAN

STATE OF TEXAS
PETER B. OLFERS
487
REGISTERED LANDSCAPE ARCHITECT
8/19/11

DRAWING
11-039
8/19/11
L4

PETER OLFERS & ASSOCIATES

Peter B. Olfers and Associates
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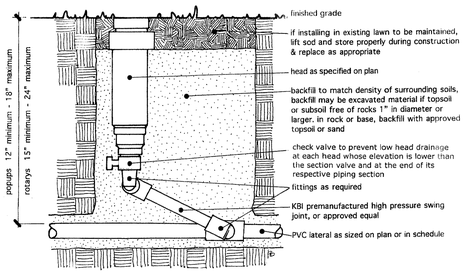
San Antonio, Texas 78229
(210) 349-9336 FAX (210)349-3820
email: pbolfers@yahoo.com

MEDIAN TREATMENT PLANS
NELSON ROAD BRUSH SITE
CITY OF SAN ANTONIO SOLID WASTE MANAGEMENT DEPARTMENT
** NELSON ROAD SAN ANTONIO, TX 78252



Typical Head Installation
(with check valve where required)
Not to Scale

Sprinkler Irrigation Component Parts List

Sprinkler Heads:
Pop-up Spray Heads select from following – Matched Precipitation Rates (MPR):
Hunter INST Series — Toro 570 Series, MPR nozzles
Weathermatic LX Series, MPR

MP 3000 Rotators:
Hunter Industries

Check Valve or Valve In Head (must install a minimum of one per each lateral):
select from the following:
Irritrol SLCV Check Valve — Rainbird 1800-SAM-PRS
Toro 570 Series, Check-o-matic — Hunter I Spray - CV

Electric Valves, except Master Valve: select from following:
Hunter PGV Series — Weathermatic 11000CR Series
Irritrol 700 Series

Master Valves: select from following:
Irritrol 700 Series — Hunter ICV Series

Double Check Valve Assemblies: select from following:
Conbraco Series 40-100 for ¾" to 4"
Febco Master Series 850 for ¾" to 6"

Piping (White for normal applications, purple for reclaimed water):
Mains: Schedule 40 PVC for ¾" to 2 ½", Class 200 for 3" and greater.
Laterals: Solvent weld for ¾" to 2 ½", solvent weld or ring-tite for 3" and greater Class 200, solvent weld for ¾" to 2 ½", solvent weld or ring-tite for 3" and greater
Fittings: a working pressure equal to or greater than the required pipe
Solvent: compatible to the pipe used

Swing Joints: select from following:
KBI swing joint — Hunter SJ Series

Wiring: All wire shall be Type UF with a minimum 4/64" insulation and sized as follows:
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15. The contractor shall be responsible for verifying the location of all other **underground utilities** and shall protect such utilities from damage, etc.

Sprinkler Heads & Valves Data:

Pop-up-Spray Heads: Hunter Pro-S Series Pop-up Spray
(4" for turf, 12" for beds and shrubs)(acceptable alternates: Toro 570, Rainbird 1800, Weathermatic LX)
(all MPR)

ARC	target PSI	15' nozzle	12' nozzle	10' nozzle	8' nozzle	5' nozzle	17' nozzle
360°	40 psi	4.0 gpm ( )	2.35 gpm (12)	1.6 gpm (10)	1.1 gpm (8)	0.5 gpm (5)	5.5 gpm (17)
270°	40 psi	3.0 gpm ( )	1.7 gpm (12)	1.2 gpm (10)	0.9 gpm (8)	0.35 gpm (5)	4.1 gpm (17)
240°	40 psi	2.7 gpm ( )	1.65 gpm (12)	1.1 gpm (10)	0.8 gpm (8)	0.3 gpm (5)	3.7 gpm (17)
180°	40 psi	2.0 gpm ( )	1.3 gpm (12)	1.0 gpm (10)	0.6 gpm (8)	0.25 gpm (5)	2.8 gpm (17)
120°	40 psi	1.3 gpm ( )	0.9 gpm (12)	0.7 gpm (10)	0.4 gpm (8)	0.2 gpm (5)	1.8 gpm (17)
90°	40 psi	1.0 gpm ( )	0.6 gpm (12)	0.3 gpm (10)	0.2 gpm (8)	0.1 gpm (5)	1.4 gpm (17)
end strip	40 psi	0.5 gpm (es)					
center strip	40 psi	1.0 gpm (cs)					
wide strip	40 psi	1.4 gpm (ws)					

MP 3000 Rotators: 90° - 0.9 gpm; 180° - 1.8 gpm

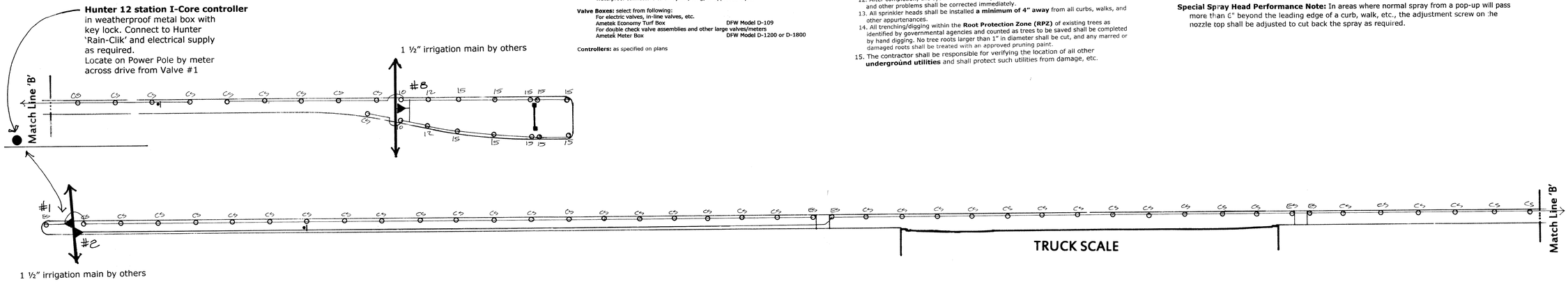
Electric Valves: Hunter PGV Series

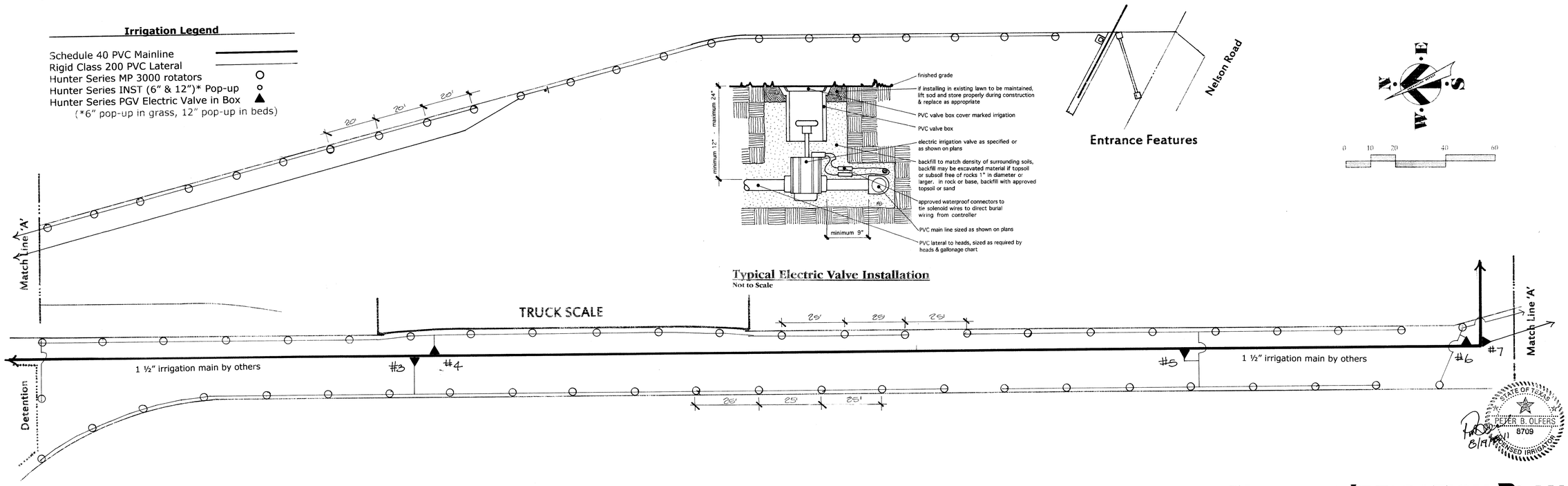
0.1 gpm to 17.5 gpm	1" valve
17.6 gpm to 40.0 gpm	1 1/2" valve
40.1 gpm to 70.0 gpm	2" valve
70.1 gpm +	3" valve

Piping Size Requirements: (based on Class 200)

no 1/2" laterals allowed	
0.1 gpm to 6.0 gpm	3/4" PVC
6.1 gpm to 10.0 gpm	1" PVC
10.1 gpm to 20.0 gpm	1 1/4" PVC
20.1 gpm to 30.0 gpm	1 1/2" PVC
30.1 gpm to 50.0 gpm	2" PVC
50.1 gpm to 75.0 gpm	2 1/2" PVC
75.1 gpm +	3" PVC

Special Spray Head Performance Note: In areas where normal spray from a pop-up will pass more than 6" beyond the leading edge of a curb, walk, etc., the adjustment screw on the nozzle top shall be adjusted to cut back the spray as required.





Typical Electric Valve Installation
Not to Scale

MEDIANS IRRIGATION PLAN

DRAWING L5
11-039
8/19/11

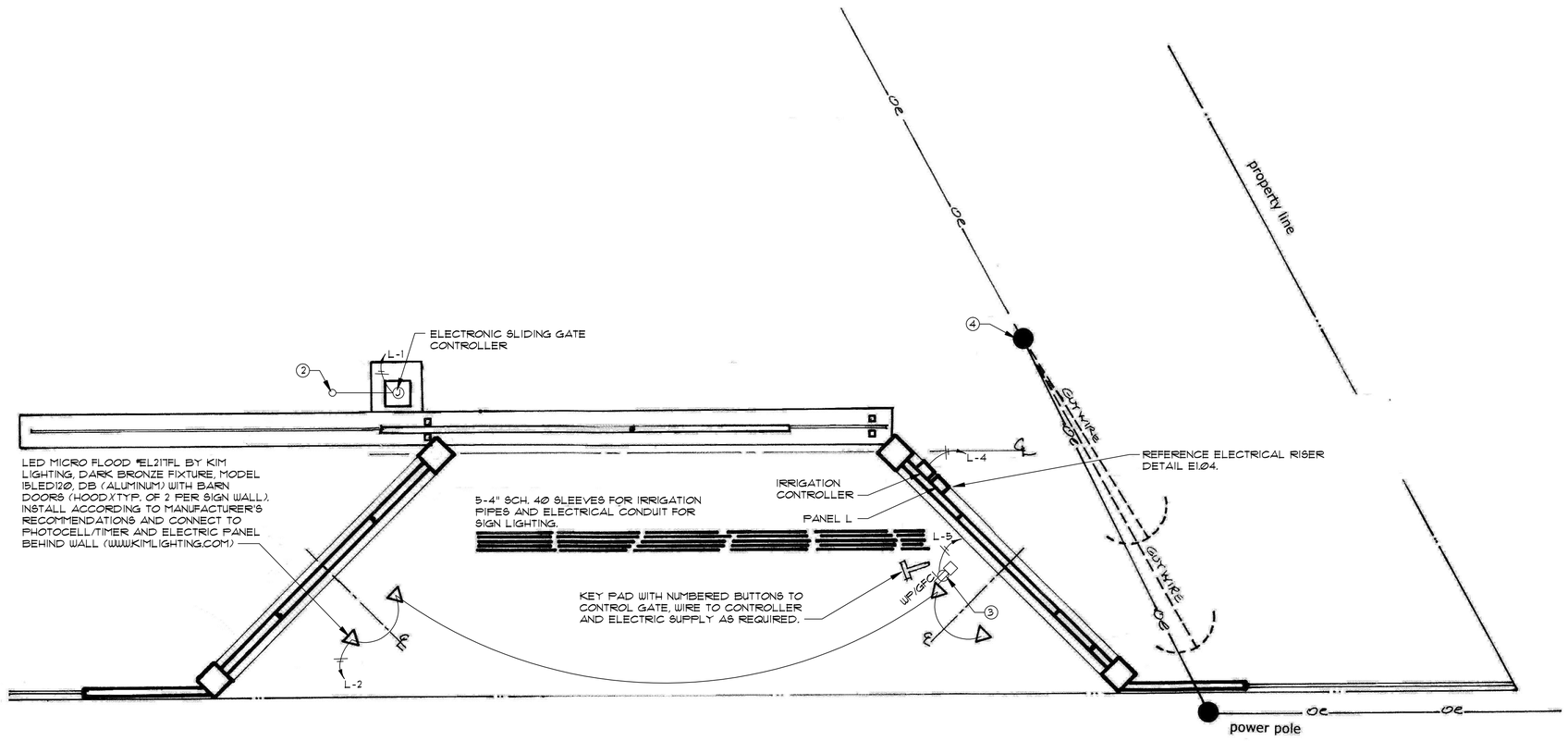
PETER OLFERS & ASSOCIATES
Peter B. Olfers and Associates
Landscape Architecture and Planning
6322 Sovereign, Suite 137B
San Antonio, Texas 78229
(210) 349-9336 FAX (210)349-3820
email: ptrolfers@yahoo.com

MEDIAN TREATMENT PLANS

NELSON ROAD BRUSH SITE

CITY OF SAN ANTONIO SOLID WASTE MANAGEMENT DEPARTMENT
** NELSON ROAD SAN ANTONIO, TX 78252

STATE OF TEXAS
PETER B. OLFERS
8709
LICENSED IRRIGATOR
8/19/11

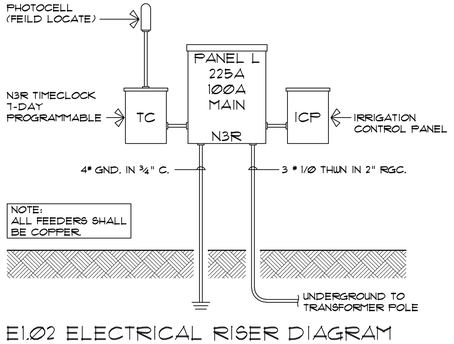


E1.01 ENTRANCE POWER PLAN

SCALE: NOT TO SCALE

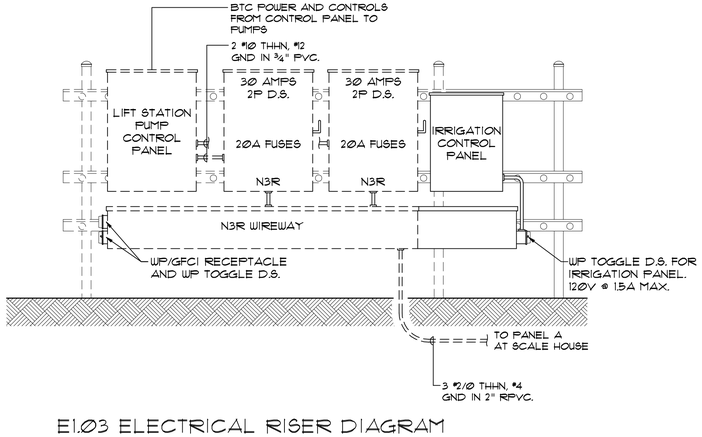
ELECTRICAL SITE NOTE:

1. ALL ELECTRICAL WORK AND INSTALLATION SHALL CONFORM TO THE NEC AND THE CITY OF SA CODES.
2. ¾" X 8' COPPER GROUND ELECTRODE FOR ELECTRIC GATE CONTROLLER.
3. MOUNT WP/GFCI RECEPTACLE ABOVE GRADE BY KEY PAD, VERIFY WITH ELECTRONIC GATE MANUFACTURER.
4. TRANSFORMER POLE, 120/240/1P/3W SERVICE.



E1.02 ELECTRICAL RISER DIAGRAM AT GATE ENTRANCE

SCALE: NOT TO SCALE



E1.03 ELECTRICAL RISER DIAGRAM AT LIFT STATION

SCALE: NOT TO SCALE

PANEL L, 225A, 100 AMP MAIN 120/240/1P/3W		
CIRC.	BRKR.	DESCRIPTION
1	30/1	ELECTRONIC GATE CONTROLLER
2	20/1	SIGN LIGHTING
3	20/1	LIGHTING TIMECLOCK/PHOTOCELL CNTRL.
4	20/1	IRRIGATION CONTROLLER
5	20/1	RECEPTACLE BY KEY PAD FOR GATE
6 - 10	20/1	SPARES
30 SPACES N3R		

E1.04 ELECTRICAL PANEL SCHEDULE

SCALE: NOT TO SCALE

ELECTRICAL LOAD ANALYSIS	
ELECTRONIC GATE CONTROLLER	1440
LIGHTING (125%)	170
MISC. (TIMECLOCK, IRRIGATION, PANEL, GATE KEY PAD RECEPT.)	900
TOTAL CONNECTED LOAD	2510-11 AMPS @ 240V/1P

E1.05 ELECTRICAL LOAD ANAYLSIS

SCALE: NOT TO SCALE

KJ Engineering, Inc.
434 BREESPORT
SAN ANTONIO, TEXAS 78216
PHONE 210.490-1155
FAX 210.490.2248

08/23/2011

ENTRENCE & LANDSCAPING
Nelson Brush Site Water System
Nelson Road, San Antonio, Texas

GA ARCHITECTURE
Guajardo & ASSOCIATES

AUTOMOTIVE ARCHITECTURE
TOYOTA DEALERSHIPS
FORD DEALERSHIPS
ISUZU DEALERSHIPS
CHEVROLET DEALERSHIPS
MERCEDES BENZ DEALERSHIPS

CHURCH ARCHITECTURE

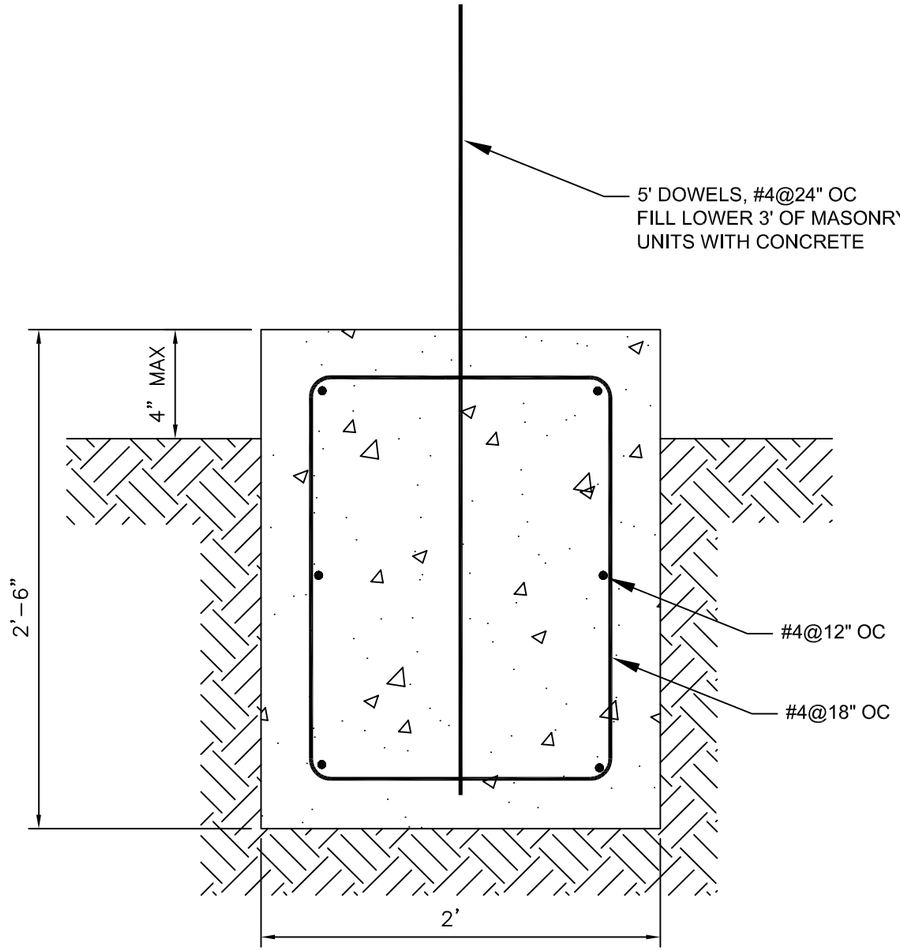
MEDICAL ARCHITECTURE
COMPUTED TOMOGRAPHY (CAT)
MAGNETIC IMAGING (MRI)
NUCLEAR IMAGING
DIALYSIS CLINICS
DENTAL CLINICS

14114 Jones Maltsberger
San Antonio, Texas 78247
Tel. 210-691-0113

REVISIONS

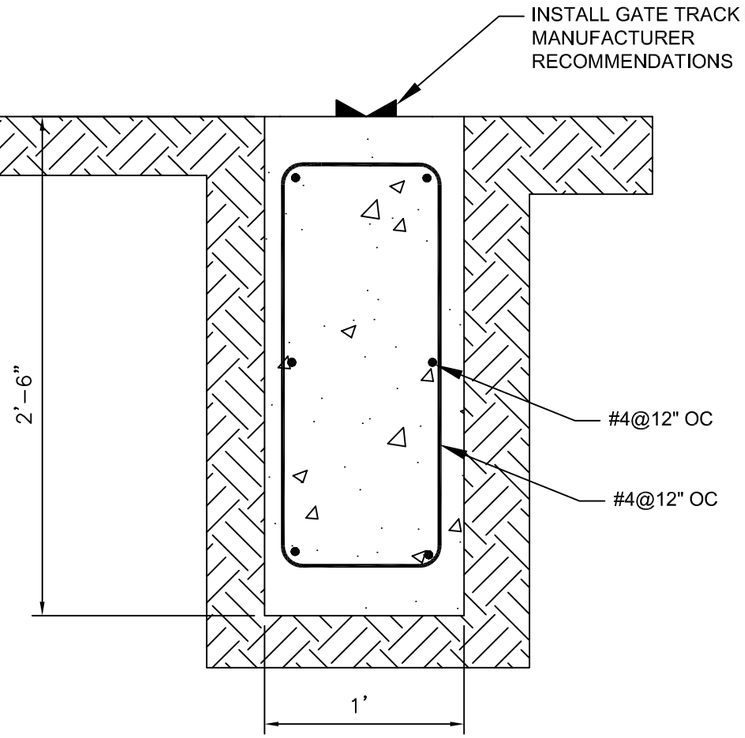
SHEET NO.

E-1



ENTRANCE WALL FOOTER DETAIL

NOT TO SCALE



GATE TRACK FOOTER DETAIL

NOT TO SCALE

STATE OF TEXAS
PAUL B. HARTNETT
70956
LICENSED
PROFESSIONAL ENGINEER

DRAWING

DATE: 8–23–2011
SCALE: As Shown
DRAWN BY: PBH
FILE: NelsonCivil

ENTRANCE WALL AND GATE FOOTER DETAIL
NELSON BRUSH SITE WATER SYSTEM
CITY OF SAN ANTONIO SOLID WASTE MANAGEMENT DEPARTMENT
8963 NELSON ROAD SAN ANTONIO, TX 78252

HES, Inc.
22622 SUENO
SAN ANTONIO TX 78256
(210) 698–8469
TDPE # F–4094

NOTICE TO PLANHOLDERS:

Please insert this Addendum into your copy of the Project Construction Documents.

CITY OF SAN ANTONIO
DEPARTMENT OF CAPITAL IMPROVEMENTS MANAGEMENT SERVICES
CONTRACT SERVICES DIVISION

RECEIPT OF ADDENDUM NUMBER(S) **3** IS HEREBY ACKNOWLEDGED FOR PLANS AND SPECIFICATIONS FOR CONSTRUCTION OF: **Nelson Brush Site Water System**

FOR WHICH BIDS WILL BE OPENED ON **Tuesday August 30, 2011 at 2:00 PM**

THIS ACKNOWLEDGEMENT MUST BE SIGNED AND RETURNED WITH THE BID PACKAGE.

Company Name: _____

Address: _____

City/State/Zip Code: _____

Date: _____

_____
Signature

_____
Print Name/Title